Social Science & Medicine 77 (2013) 1–8

Contents lists available at SciVerse ScienceDirect

Social Science & Medicine

journal homepage: www.elsevier.com/locate/socscimed

Commentary

Seven warrants for qualitative health sociology

Stefan Timmermans*

Department of Sociology, UCLA, 266 Haines Hall, 375 Portola Plaza, Los Angeles, CA 90095-1551, USA

ARTICLE INFO

Article history:
Available online 10 November 2012

Keywords:
Medical sociology
Ethnography
Interviewing
Discourse analysis

The biomedical and public health sciences have established a clear warrant for their existence. A warrant is a broadly shared justification for a research-based discipline (Katz, 1997). From the post World War II WHO proclamation aiming for "a state of complete physical, mental, and social well-being" to a recent reconceptualization of health as "the ability to adapt and self-manage" (Huber et al., 2011), the warrant for the health sciences is to provide the knowledge base for the collective achievement of individual optimization. In spite of a diversity of interpretations about health priorities, the applied health disciplines have rallied around this mandate with research to prevent mortality and cure morbidity, and to alleviate the human, social, and economic costs of health or a lack of health. Articulated in grant proposals, enshrined in the notion of evidence-based medicine, and repeated in research institute's vision statements, the broad purpose suggests a common interest beyond narrow disciplinary borders. The warrant to improve population and individual health offers a ready answer to the critic's question of why we should bother with health research.

Given that biomedical and public health research is united by the goal of optimizing the ability to adapt and self-manage, does health sociology need a separate warrant? Robert Straus (1957) famously distinguished two communities: researchers studying sociology *in* medicine and sociology *of* medicine. Sociologists in medicine would answer the question of the need for a separate warrant negatively. These social scientists have hitched their wagon to the broader health mandate: aiming to provide knowledge that directly benefits health and, more often, health care. They study social aspects of health – such as health beliefs, patient–doctor interactions, compliance, or cultural sensitivity – to improve health care delivery and utilization. Many of these topics have become "social" by default: they have been ceded to social scientists because their multicausal and experience-based intractability makes them impervious to standard health research. The danger, as Bloor (1991) pointed out for the sociology of science, is that such a residual approach cordons off social factors, bifurcating into a purely medical realm and a limited jurisdiction where social factors proliferate. Still, improving health using sociological research has a strong track record as long as social scientists are content working within an externally defined warrant.

The sociology *of* medicine or, more broadly, health, in contrast, is a sub-specialty of sociology that happens to study the health field. Its purpose is to contribute to a broader scholarly literature with ideas, concepts, methods, and theories drawn from the substantive area of health. The main warrant here is to conduct solid, theoretically driven social science research, paying only secondary attention to the humanitarian subtext of healing and suffering. Most medical sociology publications, including those of *Social Science and Medicine*, fall into this category: they aim for a specific and relevant scholarly contribution based on empirical or theoretical work. As such, they mostly speak to an internal audience of fellow sociologists, thus risking insularity.

In this commentary, I would like to reflect on warrants for health sociology that go beyond a straightforward purpose to aid health improvement as traditionally defined and beyond a disciplinary contribution. My goal is to highlight ways to capitalize on health sociology's subject matter and its distinct sociological toolkit. Health sociology is part of a culture that values health improvement but not necessarily in the way that health is conventionally or

---

* Tel.: +1 310 206 6526; fax: +1 310 206 9838.
E-mail address: Stefan@soc.ucla.edu.

http://dx.doi.org/10.1016/j.socscimed.2012.10.004

professionally defined in biomedicine and public health. The added value of health sociology is a critical reflection of health itself – all its specific manifestations, actions, people, priorities, and institutions – using the methods and concepts of sociology. Critical reflexivity is aimed at an examination of assumptions, unchallenged orthodoxies, and consequences that are ignored or invisible to health stakeholders not attuned to social patterning.

The issue of a warrant beyond a scholarly contribution and health improvement is particularly acute in qualitative research in health sociology – the family of methods that privilege experiences and interactions including ethnography, historical methods, discourse analysis, and interviews. Considering its existentially provocative subject matter, this research has the potential to reach diverse audiences. At a minimum, research results should be of interest to the people studied but should also influence other stakeholders. That a qualitative sociological analysis reaches either one of these audiences is not guaranteed: how do social scientists who base their claims on people's sensibilities and experiences offer an added value beyond these accounts? If the study findings are unrecognizable to research subjects, the researcher risks complaints about validity. Yet, if the findings retain high fidelity to people's experiences, what is the news value of the sociological research? This conundrum is less an issue for quantitative or experimental research where methods reveal counterintuitive findings lying beyond the grasp of individual experience. Research based on lived experience is vulnerable to criticism of esotericism or banality.

In order to reach naïve, uninterested, or opposed audiences and capitalize on the potential of research to transform conventional modes of thought, qualitative health sociologists may want to reflect upon warrants for their projects. I distinguish between seven warrants where qualitative health sociology has a strong advantage over other methodologies and other disciplines. While one study is usually acting upon more than one warrant, I find it useful to discuss them independently to elaborate distinctions between them.

This commentary does not constitute an editorial policy for *Social Science and Medicine*. This journal continues to welcome an inclusive spectrum of high-quality medical sociology scholarship, including work marshaling sociological methods and theories to improve conventionally conceptualized health and scholarship that contributes to an internal conversation among sociologists. As a reviewer pointed out, honing ideas internally prior to dissemination has a distinct utility. Yet, if the majority of published papers receive the most careful reading and the most readers during the review process (Hirschauer, 2010), it may be timely to reflect upon ways to conduct and write-up research to foster crossover interest.

Seven warrants

Illuminating the construction of medical beliefs

The most common warrant for qualitative health sociology is to draw attention to an established or emerging area of health and show that what many take for granted is socially and historically contingent. Qualitative health sociologists are able to ask fundamental questions about the underlying assumptions and prevailing factual understandings of health, disease, diagnosis, treatment, and explanations.

Where quantitative sociologists and other health researchers, for example, have extensively contributed to scholarship on the behavioral determinants of health, David Armstrong (Armstrong, 2009) instead mapped the genealogy of the notion of health behavior. Where does the consensus that behavior matters for health come from and when was such understanding institutionalized? What work does a belief in health behaviors do in contemporary medicine? Looking at the use of "behavior" and related terms in *The Lancet* since 1823, the *American Journal of Public Health* since 1911, and relevant journals in psychology and sociology, Armstrong found that the term initially simply expressed the movement of inanimate objects or body parts. The allied notions of "habit" and "conduct" reflected the moral governance of human action. In the early 20th century under pressure of psychological behaviorist theories and interest in the development of children, behavior entered the health literature as part of a deterministic worldview. It was viewed as a predictable response to an internal physiological or an external environmental trigger. The influx of more cognitive theories later in the century imbued health behavior with more agency and autonomy. The modern version views behavior as part of a self-appraising patient making autonomous choices that have health consequences. "Health behaviors," Armstrong wrote, "had graduated from being the dependent variable, the outcome of biological and environmental stimuli, to the status of independent explanatory variables in their own right" (Armstrong, 2009, p. 920). At the close of the 20th century, when medical error became problematized, behavior was further extended to the actions of clinicians. Researchers became interested in experimentally influencing professional behavior.

In contrast to experimental and quantitative methods that tend to deploy and further reify biomedical constructs, qualitative health research generally has emphasized how contemporary realities came into being and the varied activities they allow. Understanding the historical origins of behavior does not contribute directly to mapping of health behaviors but contextualizes the overall project of linking health and behaviors. By showing the intellectual conditions under which health behavior has become a ubiquitous dimension of health care, Armstrong explained that the contemporary focus on individual behaviors to improve health is not a historical constant but may fade with a change in theories and practices. At the same time, the project also demonstrates that the current understanding of health behavior as malleable under the purview of medicine/public health provides a very different view of human nature and action than one that is more deterministic or individualistic. The upshot of such an analysis is that the current understanding of health is neither preordained nor natural but, as Everett Hughes pointed out, "it might have been otherwise." (see Bowker & Star, 1999, p. 328).

Qualitative health research gravitates toward the examination of construction processes of how medical knowledge is perceived as real because of its affinity with a broad array of social constructivist theories. Clarke and Star have noted that sociological research has multiple "theory-methods packages," in which particular methods have been repeatedly linked to specific theories (Clarke & Star, 2007). The Armstrong study using a medical discourse methodology is situated within the theoretical legacy of a Foucauldian perspective, which is an obvious fit between theory and methods considering Foucault's emphasis on discourse, genealogy, and shifting regimes of medical practices (Armstrong, 1990; Foucault, 1976). Similarly, historical qualitative methods may lend themselves to an examination of how classification systems become appropriated over time and feed back into new understandings of self and disease, leading to modification of classifications, linking historical inquiry with Hacking's theory of looping effects (Eyal, Hart, Onculer, Oren, & Rossi, 2010; Hacking, 1999). By retrieving people's accounts of illness and healing and how it affects one's understanding of the past, present, and future self, interview data works well with a close analysis of how people actively construct meaning as people living with diseases (see, for example, Bury, 1982; Charmaz, 1991; Pierret, 2003). The combination of qualitative methods and constructivist theories thus initiates a critical inquiry into the origins and assumptions of health knowledge and beliefs.

Witnessing of health victories and losses

A different warrant playing to the strengths of qualitative health sociology is to systematically document both the new lives made possible with biomedical innovations, and the suffering of individuals and groups marginalized in contemporary health regimes. This approach fosters empathy with a common humanity and captures the pay-offs and costs of a reliance on biomedical interventions. As historian Charles Rosenberg noted, "These are the best of times, and these are the worst of times for … clinicians—and for their patients. … Medicine has been technologically reinvented in the past half century, yet it remains in some ways what it has always been, an intensely personal effort to deal with the pain and incapacity of particular men and women" (Rosenberg, 2007, p. 1).

In Western countries, public health and health care have made tremendous although uneven progress in turning deadly diseases into chronic conditions, pushing the boundaries of infant viability, and treat previously debilitating mental and physical conditions (Cutler, 2004; Timmermans & Haas, 2008). At the same time, public health and health care remain confronted with financial limits, unequal access to care, bureaucratic constraints, tremendous variation in the quality of care, and the age-old problem of limits to health knowledge. Behind the statistics lie countless individual and collective dramas that profoundly affect lives. Documenting and explaining the turning points in those lives as lived within quotidian contingencies is the bread and butter of qualitative health sociology.

Qualitative social scientists have developed extensive conceptual and theoretical approaches to capture the lived experience of residing in the spotlight or shadows of health interventions. Much of this literature aims to capture a patient-centered perspective without succumbing to biomedical terminology, relying on concepts such as illness narratives (Frank, 1995; Kleinman, 1989; Riessman, 1990) and biographical disruption (Bury, 1982) at the individual level, and embodied health movements (Brown et al., 2004; Epstein, 1996) at the collective level.

For example, by capturing the lived experience of a group of people marginalized in contemporary health care, social scientists joined forces with patient activists to problematize biomedical interventions in the area of U.S. intersex activism. During the second part of the twentieth century, the standard of care for infants born with ambiguous genitalia was to receive hormonal and surgical interventions to conform to either a male or female gender. Prompted by Anne Fausto-Sterling's (1993) account of the "five sexes," Cheryl Chase, who underwent these interventions, started an intersex advocacy and self-support organization. Intersex activists, some of whom were social scientists, questioned the shaky evidential and theoretical base for sex assignment for cosmetic rather than medically indicated reasons. While intersex activists have been at the forefront of this advocacy battle, social scientists including Alice Dreger (1999), Katrina Karkazis (2008), Suzanne Kessler (1998), and Sharon Preves (2003) brought the experiences of adults with intersex conditions into the public by documenting the long-term harms of genital surgery, the often opposing interests between parents and intersex children, and—above all—the role of biomedicine in stigmatizing intersexuality as a psychosocial liability shrouded in shame and silence. Drawing on feminist and queer theories, this literature is united by a consensus that medical interventions for intersex conditions are preoccupied with conformity to gender norms rather than biomedical risks. In part due to the pressure of this advocacy movement, health providers in 2006 dropped the term "intersex" for "disorders of sex development" to emphasize the specific but limited clinical aspects of ambiguous genitalia (Lee, Houk, Ahmed, & Hughes, 2006).

Qualitative health research gave a forum to the intersex community to air their experiences, which had become invisible for decades in a biomedical paradigm focusing primarily on surgical and hormonal interventions. The methods are ideal for capturing the processes of sexual identity formation, medical surveillance over the life course, the keeping of secrets by family members and health care providers, and the difficult journey to figure out what happened.

Qualitative health sociologists have noted the interdependency between the successes and failures of biomedicine. Paradoxically, much of the chaos caused by biomedicine follows from the ever-expanding aspiration to control disorder. Thus, the diagnostic success of medical technologies generated lower tolerance for uncertainty and greater medical surveillance of people with unexplained symptoms (Fox, 2000; Nettleton, 2006). In *The Fibromyalgia Story*, Kristin Barker (Barker, 2005) found that women in her interview study undertook on average a six-and-a-half-year diagnostic odyssey as they took their complaints of debilitating diffuse pain, fatigue and depression to a series of clinicians. After extensive physical tests failed to discover a disease, each of the women was referred to a mental health worker under the assumption that their complaints were psychogenic rather than organic. This journey ended when a sympathetic clinician diagnosed them as fibromyalgia sufferers based on a pressure test. The "psychological amnesty" (Barker, 2005, p. 111) of having a named disease was tempered, however, by the realization that little treatment was possible. The seeming failures of biomedicine to offer a diagnosis and treatment lead thus to an intensification of medical surveillance.

Witnessing and documenting the collective costs and benefits of biomedicine is a powerful warrant for qualitative health research because the authority of speaking on behalf of health is firmly ensconced within a hierarchy of knowledge credibility (Becker, 1967). In such hierarchies, experiential knowledge of patients and their caretakers is subservient to health experts drawing from epidemiological or biological data (Anspach, 1993; Star, 1991). The latter data is institutionally and professionally self-serving and therefore distorts what is happening in people's lives caught up in preventative or curative activities. Entire groups of people, health practices, and even allied health professionals have become marginalized because they do not fit within current biomedical orthodoxy. The psychologizing of sufferers and other systematic devaluations comes at a personal and collective cost, which qualitative health research is able to document because it is not beholden to official disease and diagnostic categories (Aronowitz, 1998; Jutel, 2009).

Unfulfilled promises

Medical and public health interventions come with promises of relieving the burden of suffering, curing disease, enhancing well-being, preventing the onset of disability, and—the ultimate trump card—saving lives. The underlying notion is that much contemporary disease causes unnecessary pain and anguish, which can be effectively avoided or manipulated with public health interventions such as screening or vaccination campaigns and biomedical treatments. These promises are tied into regulatory, organizational, and behavioral scripts (Akrich, 1992; Berg, 1997). Inevitably, however, such scripts underestimate the complexity of the social world and unintended consequences multiply. Hence, the reality of health workers and patients no longer matches the promises, requiring remediation work to realign interventions and expectations.

Documenting the gap between promises of cure/relief and the actual accomplishments forms a fertile warrant for qualitative health research. Bracketing what health interventions are supposed to do to focus on the experienced effects reveals unintended consequences, spillover effects, and collateral damage. This warrant is powerful exactly because it taps into lived experiences and offers an explanation. Newborn screening, for example, was recently expanded in the U.S. with the explicit promise of preventing disability and saving lives (Watson, Lloyd-Puryear, Mann, Ronaldo, & Howell, 2006). The program was initially instituted in the 1960s to detect cases of phenylketonuria (PKU) prior to the onset of symptoms. In spite of implementation problems (Paul, 1997), PKU ended an ideal condition for population screening: relatively straightforward dietary interventions could offset mental retardation. Due to technological innovations that allowed simultaneous screening for multiple conditions, the screening panel was expanded to 56 conditions with the promise of secondary prevention of rare but devastating diseases. In spite of a nearly universal implementation of the screening program, the first follow-up studies indicate that newborn screening succeeded in identifying infants with rare metabolic conditions but it is unclear that the screening program has fulfilled its promise of saving lives (Feuchtbaum, Dowray, & Lorey, 2010).

In a three-year ethnographic study of families followed for positive newborn screening results, Timmermans and Buchbinder deployed the promised benefits as a benchmark for an evaluation of experienced health interventions. They found critical discrepancies between what was promised and the experience of parents of an infant with a positive newborn. Newborn screening flagged a population of infants with deep uncertainty about their risk for disease. The screening results indicated the possibility of disease but follow-up testing remained inconclusive. Clinicians wondered whether the infants actually had a condition, in spite of the initial positive screen. Even though interventions may be unnecessary, they kept the infants under intensive medical surveillance and instituted preventive measures. The mere possibility of a devastating disease also had far reaching consequences for how parents treated their offspring (Timmermans & Buchbinder, 2010, see also Grob, 2008).

The added value of a social science analysis is not only to reframe emotions and experiences but also to situate these reactions within the logics of a complex and countervailing macro system of multiple institutions and actors that systematically produce unfulfilled promises. Thus in the newborn screening study, even for infants with confirmed disease, a public health screening program is only one component in the chain of preventing the onset of rare metabolic conditions. The success of screening depends on a health care system that is able to provide follow-up care, access to treatments, and metabolic specialists who are able to communicate with families (Timmermans & Buchbinder, 2012). As an ethicist put it, “The screening program provides no direct benefit to untreated children.” (Botkin, 2009, p. 167). Newborn screening’s promise of preventing disease may thus be voided by many false positive results, undetermined cases, and a structural inability to institute needed preventative measures.

The social scientist documenting unintended consequences not only gives voice to scattered individual experiences but also demystifies health promises. Every promise for a cure, for prevention, for saving lives constitutes the hope that something seemingly inevitable can be avoided. Many actors—and not just health workers but also patients and their organizations–have invested much in the promises of health interventions (Rabeharisoa & Callon, 2002). Showing that actual practices fall short of goals shows that some of these hopes are likely going to be unfulfilled. Still, the upshot of a social science analysis may be to produce more feasible expectations of what health interventions may realistically achieve. For the newborn screening example, the social science contribution is a reminder that broader health care system barriers must be changed in concert with improving screening technologies if a change in mortality and morbidity outcomes are to be achieved.

Follow the money

Another warrant for qualitative health research is to examine the multiple financial incentives in health as they directly and indirectly motivate various stakeholders. The counterpart of the morally uplifting motivation to care and heal people is crass commercialism in which health is not pursued as an intrinsically beneficial good but as a commodity for profit. At the professional level, Parsons (1951) noted in one of the earliest medical sociology writings that physicians are motivated not differently from business people but that they are held back from pursuing their financial self-interest by institutional norms, rules, and roles reinforced by state regulations. More recent commentators have noted that many of these institutional firewalls have broken down due to professional activism to commercialize health care and create monopolistic health markets (Light, 2000, 2010; Starr, 1982), raising questions of how for-profit medicine affects patient care. Following the influx of financial resources, much of the scholarship has shifted from the role of medical professionals to the role of business conglomerates in setting a health agenda and the tensions between private and publicly funded health care systems in chasing health profits while providing care (McKinlay & Marceau, 2002).

Pursuing the simple question, “who is making money here?” as an analytical prompt tends to clarify mundane health care interactions. Take the following exchange in a clinical encounter: a patient describes symptoms of major depression followed by a request for a particular brand of antidepressant. What will the physician prescribe? Direct-to-consumer advertising may shed light on the drugs patients request and those they receive (Frosch, Grande, Tarn, & Kravitz, 2010; Kravitz et al., 2005). A close analysis of the financial incentives used by drug representatives visiting clinical practices to entice changes in prescription (Oldani, 2004) may explain pharmaceutical choices patients receive in clinics (Greene, 2007). The request or offer to prescribe a particular drug is thus embedded in a political economy in which pharmaceutical companies aim to influence both supply and demand. Their reach includes the availability of medical knowledge for evidence-based decision-making (Moreira, 2011; Torbica & Fattore, 2010), although physicians may bypass such evidence for decisions based on more traditional factors to maintain autonomy (Armstrong & Ogden, 2006). The fight for a share in the pharmaceutical market affects not only clinical encounters but also entire national health infrastructures. Paul Farmer (2005, chap. 6) has taken issue with market-based medicine that systematically deprives the poor in developing countries of access to effective drugs and treatments. Adriana Petryna (2006) documented the outsourcing of clinical trial testing to cheaper and more desperate drug markets across the globe.

Money, however, is not necessarily care’s antagonist; much care work is done through various financial relationships (Healy, 2006; Zelizer, 2011). Financial discrepancies constitute critical reality checks of how different forms of care are valued. Rene Almeling, for example, observed that egg agencies and sperm banks paid donors differently. Egg donors received a fee of several thousands of dollars, often complemented with additional monetary gifts when a pregnancy ensued, while sperm donors received a nominal amount of money for every sample that passed stringent sperm count criteria. Almeling dismissed obvious explanations for this discrepancy: biological differences between eggs and sperm and the economics of supply and demand. While egg retrieval requires surgery and individual women have indeed fewer eggs, there are many more women willing to donate eggs than men donating sperm. In fact, egg donors' profiles languish on websites while sperm banks have to resort to finder's fees to locate donors. Instead, Almeling showed that the discrepancy is justified based on cultural notions of motherhood and fatherhood, with a greater financial premium put on women's biological contribution to conception. Egg agencies embraced an altruistic rhetoric toward egg donation with one-to-one relationships between donor and grateful egg recipient while sperm donation was viewed as a job done for money and devoid of gift-giving rhetoric. "As a result," Almeling concludes, "both eggs and egg donors are more highly valued than sperm and sperm donors in this medical marketplace, where it is not just reproductive material but visions of maternal femininity and paternal masculinity that are marketed and purchased" (Almeling, 2011, p. 83).

Following the money is a critical warrant for qualitative health sociology exactly because the broader purpose of care and health improvement tends to obfuscate financial interests. While other methods and disciplines have shown how financial resources stratify health access and outcomes with standard economic health indicators, qualitative social scientists are able to trace the subtle and unexpected ways in which financial incentives influence the behavior of all parties involved in health care. Qualitative social scientists have problematized the flow of money and profit and concomitant regimes of commensuration in highly visible areas such as the organ transplant community and the organ trade, medical tourism, and the inequities of drug markets (drugs for erectile dysfunction but little investment in new antibiotics). It is clear that profit motives affect the good and the bad of health and health care. Tracing monetary incentives and relationships does need not lead to crude economic determinism but can reveal the innovative potential as well as inequities that financial resources afford.

Intersituationality

Qualitative health sociology is particularly well poised to examine actors across space and time. Rather than seeing people in locales where health is officially supposed to be happening – i.e., in medical settings – qualitative researchers have an opportunity to study people at home, at work, and at leisure activities (De Vries, 2003). They can also follow health holistically over several years, even across generations. Inter-situational research by design decenters biomedical or public health definitions of the situation and helps to contextualize health issues within other pressures of living and within biographies across the life course.

Inter-situationality also carries over to the study of health care providers by contextualizing actions across multiple sites. Many hospitals now have bioethicists on staff. They are called to provide expert advice on problems that fall under their jurisdiction. Once a situation is defined as bioethical, it presumes a focus on adherence to principles such as autonomy, beneficence, and justice centered in discrete cases. Rather than studying bioethical consults on a case-by-case basis, Daniel Chambliss' wide-ranging ethnographic study of nurses in two teaching hospitals demonstrates that hospitals systematically generate bioethical problems (Chambliss, 1996). Here, the intersituational payoff consists of comparing nursing care in routine situations across the hospital and in situations defined as bioethical dilemmas. Chambliss argues that the root cause of recurrent "bioethical" problems is occupational group conflicts in which nurses are caught between competing physician, patient, and institutional demands. Nurses face a series of recurrent practical problems due to their position in a division-of-labor with unequal power but only some problems will be defined as bioethical. Such framing is a political move: "moral arguments are weapons in a fight, usually decided in favor of the greater power. Ethics committees, in turn, are useful not as objective arbiters but as anticipated allies in those fights" (Chambliss, 1996, p. 93).

The need for studying health intersituationally flows from the increased complexity and specialization of all health-related aspects. The sprawling division of labor that Freidson (1989) observed has only intensified in past decades: even within the same organizations, clinicians working in hospital administration no longer know what their colleagues on the frontline do. The number of drugs, biomedical articles, surgical interventions, pediatric advice, ancillary health personnel, regulatory mechanisms, alternative forms of healing, third parties, organizational settings, and entire industries has multiplied and keeps shifting under various incentive structures. This explosion of labor and resources within health and health care has created disconnections and vulnerabilities typical of tightly linked, highly interdependent social systems (Perrow, 1984).

Inter-situationality is a hallmark of qualitative research out of reach of other methods. Longitudinal survey research in panel studies is at best only able to capture the same people at different times in a series of cross-sectional snapshots; qualitative health researchers – especially ethnographers – are able to follow people continuously as they weave in and out different areas of life – doing health seriously, playfully, or begrudgingly. To act upon this warrant is straightforward: take advantage of the longitudinal and cross-situational strengths of qualitative methodology.

Causality and social mechanisms

The final warrant of qualitative health research is an ability to offer causal explanations that elucidate health related topics in particular luminous and poignant ways. Qualitative researchers' logic of causality differs somewhat from that of quantitative researchers: while much quantitative research is preoccupied with calculating the average effects of causes, qualitative research is more likely to distinguish causes to explain variation within observations (see Katz, 2001; Mahoney & Goertz, 2006). In qualitative research, making a causal argument means to generalize a temporal narrative for the purpose of rendering events meaningful. The added value of a specific causal explanation is predicated on its engagement with other possible explanations discussed within relevant communities. Qualitative researchers put meaning making and its determinants central in causal explanations. Social mechanisms are part of causal explanations because they indicate a means by which causes and effects are connected. In qualitative research, social mechanisms become apparent when actors confront similar problem situations and mobilizing more or less habitual responses (Gross, 2009).

Katherine Kellogg's superb ethnographic study of reform efforts of the shift length of surgeons gets at social mechanisms comparatively (Kellogg, 2011). When a leading medical accreditation agency required residents in surgery to work a maximum of 80 rather than the more typical 100–120 weekly work hours, teaching hospitals filed paperwork indicating compliance but most did not change their actual practices. Kellogg compared three hospitals prior to and after the reform: one hospital that never changed practices, another in which shifts were shortened but then reverted back to the old system, and a final hospital in which the shifts were actually shortened. The three hospitals were comparable in terms of reputation, size, patient load and other relevant characteristics. In each hospital, Kellogg witnessed a struggle between reform-minded clinicians and an old guard. The traditionalists reacted similarly across the hospitals in defining reformers as "weaklings," and the reformers fought back in similar ways. The difference in the one hospital where reform succeeded was a culture of sharing experiences, developing counter strategies, and building alliances with friendly administrators while making the argument that the old guard negatively affected patient care – a critical issue in surgery wards. The reform was greatly facilitated by a shared meeting space, which brought reform-minded clinicians together to strategize. Kellogg demonstrated that highly contested reform efforts at the macro level require a similarly "collective combat" effort at the institutional level. Her research shows *how* such a combat can be won.

Lutfey and Freese (2005) examined the causal mechanisms by which diabetes care outcomes differed for lower and middle-class patients visiting either a county or a private hospital. They found that in the private hospital, continuity of care provided better information to clinicians making assessments and designing treatment regimens. The private hospital also had a more extensive diabetes education available and relied less on residents for patient-care. Patients' financial resources further affected access to auxiliary diabetes treatments and inflexible work shifts among the working class may constrain diabetes care in ways that are easier to solve for white-collar workers, who are typically in control of their working time. The relative cost for adhering to diabetes medication was higher for patients struggling with transportation, lack of insurance, or unsafe neighborhoods (affecting the ability to exercise).

Tracing causal processes over time as they manifest in interactional friction plays again to the strengths of qualitative health research. Lutfey and Freese document how the accumulation of many small, pervasive advantages affect diabetes outcomes across social class – demonstrating the multiple pathways by which cause and outcome are connected. Lutfey and Freese indicate that, rather than personal motivation, particular institutional procedures and financial incentives may have critical consequences for certain groups of people but not for others. Such multicausality is not always easily distillable into a couple of policy take-away messages but emphasizes the multidimensionality of health interventions.

Reframing dominant perspectives

Due to a strong tradition of inductive inquiry in health sociology, qualitative health research has put a premium on concept development and theorization following the precepts of grounded theory and related data analysis approaches. Some sociological concepts and theories have penetrated health discourse as an accepted way to frame situations and events. The notion of medicalization, for example, has received traction beyond introduction to medical sociology courses to enter the biomedical literature, activist communities, news media accounts, and medical practice. Different groups of people now wield the term to point to (often unnecessary) expansion of medical categories in realms of everyday life (Conrad, in press). Medicalization helped crystallize a growing unease with medical interventions in areas that were being problematized by health social movements taking an antagonistic stance to medical overreach. As such, the idea of medicalization both tapped into a Zeitgeist and descriptively captured a distinct and easily recognizable process: while there was once was no medical language to describe a phenomenon, people now visit clinics to address an emergent pathology. Medicalization fits this experience. Other examples of social science concepts that have found a wide audience include Goffman's view of stigma, Parsons' writing on the sick role, Bourdieu and other's notion of social capital, or Kubler-Ross' conjectures about stages of death and dying.

This warrant follows from the previous ones that critically examined knowledge previously taken for granted and the unintended or unfulfilled claims biomedicine has made to cure and care. Here, qualitative health sociology aims not to document or explain contemporary biomedicine but to rely on constructivist theories to render alternative definitions of reality. Sociologists acting on this warrant aim to develop concepts and theories that travel not only among specialists but also among other communities. This warrant is the most difficult to pre-design in a research project because its success depends on a study's reception. Still, there are obvious jargon-ridden, etic conceptual vocabularies that are unlikely to become the talk of health journal clubs across the country, although they may have some analytical value among social scientists. Concepts that require italics to stand out or four lengthy paragraphs of background to explain are more likely to founder among a limited audience of social scientists. In contrast, concepts that have an intuitive relevancy and a roll-off-the-tongue quintessence may resonate widely. Good concepts help elucidate recurrent practical concerns where people grasp for meaning. Bosk's (1979) much re-read study of errors in surgery, for example, taps into a critical quandary of surgical training programs: how to allow surgeons-in-training to make mistakes knowing well that a mistake may cost lives? Bosk's distinction between technical-judgmental and normative errors delineates how surgeons can allow for some errors with the expectation that they will not recur while strongly cracking down on errors that should not have happened.

The trick for acting on this warrant, then, is to cultivate ways in which theories and concepts work for others. As with all theorization, there seems to be a tipping point where popularity denigrates into vulgarization with a loss of critical nuance. Concepts that transcend disciplinary boundaries often become appropriated in counterintuitive ways. Medicalization, for example, is rarely used in the more radical libertarian way that Ivan Illich (1976) used in his writing about iatrogenic hubris in *Medical Nemesis* or with the focus on social control central to the work of Irving Zola (1972).

Conclusion

The last paragraph of a qualitative research paper typically produces the study's upshot: what are the implications beyond the study's concrete results? Reflecting upon warrants means considering what could be put in the last paragraph during the study's design phase. If everything goes well – that is, if the methodology is sound, valid, and appropriately implemented – what could be the take-home message for non-sociologists, for people who rarely read social science, or who may be opposed to a social science analysis? The warrants for qualitative health sociology cultivate the method's advantages to reach audiences beyond the internal community of social scientists. While making sociological contributions is already challenging, such contributions are insufficient to maximize health sociology's potential to transform public debates about health. Qualitative health sociology's major strength is to capture and explain poignant and luminous experiences of health and disease as they are lived in the contemporary moment. This advantage can be harnessed to bracket common and professional wisdom of health promises in order to critically examine what kinds of health are actually being experienced and enacted. Such critical analysis is aided by examining the constructed nature of prevailing health beliefs and knowledge, witnessing health's beneficiaries and the collateral damage of a lack of health, examining the unfulfilled promises of health interventions, following financial incentives, following health across place and time, detecting causal mechanisms, and reframing dominant perspectives.

Who should be the interested stakeholders? The continuous reminder to critically examine health beyond a public health or biomedical perspective may suggest that health providers and researchers should be avoided. That is a misreading. Considering their authority and broad jurisdiction, health officials are likely to be a key potential audience. The warrants meet health stakeholders halfway, marshaling the strength of the methods to bring up issues, questions, and concerns that traditional health researchers and stakeholders may not even have been aware of but are still highly relevant. While few qualitative health sociologists would question the importance of health, their research grounded in how people perceive, evaluate, and experience health interventions offers a distinct perspective on what kinds of health are available to whom. Reaching out to non-social scientists thus does not mean subverting social science research for biomedical interests but demonstrating the merit and added value of qualitative health research based on methodological and theoretical integrity.

Acknowledgments

I thank Rene Almeling, Mara Buchbinder, Peter Conrad, Neil Gong, Lianna Hart, Tanya Stivers, Amy Zhou, editor Ellen Annadale and anonymous reviewers for comments on earlier versions and the HCTP program at the University of Toronto for inspiration.

References

Akrich, M. (1992). The description of technical objects. In W. Bijker, & J. Law (Eds.), *Shaping technology/building society: Studies in sociotechnical change* (pp. 205–224). Cambridge, MA: MIT Press.

Almeling, R. (2011). *Sex cells: The medical market for eggs and sperm*. Berkeley and Los Angeles: University of California Press.

Anspach, R. (1993). *Deciding who lives: Fateful choices in the intensive care nursery*. Berkeley: University of California Press.

Armstrong, D. (1990). Use of the genealogical method in the exploration of chronic illness: a research note. *Social Science & Medicine, 30*, 1225–1227.

Armstrong, D. (2009). Origins of the problem of health-related behaviours: a genealogical study. *Social Studies of Science, 39*, 909–926.

Armstrong, D., & Ogden, J. (2006). The role of etiquette and experimentation in explaining how doctors change behavior: a qualitative study. *Sociology of Health and Illness, 28*, 951–968.

Aronowitz, R. A. (1998). *Making sense of illness*. Cambridge, UK: Cambridge University Press.

Barker, K. K. (2005). *The fibromyalgia story: Medical authority and women's worlds of pain*. Temple University Press.

Becker, H. S. (1967). Whose side are we on? *Social Problems, 14*, 239–247.

Berg, M. (1997). *Rationalizing medical work: Decision support techniques and medical practices*. Cambridge, MA: MIT Press.

Bloor, D. (1991). *Knowledge and social imagery*. Chicago: University of Chicago Press.

Bosk, C. L. (1979). *Forgive and remember: Managing medical failure*. Chicago: University of Chicago Press.

Botkin, J. R. (2009). Assessing the new criteria for newborn screening. *Health Matrix Cleveland, 19*, 163–186.

Bowker, G., & Star, S. L. (1999). *Sorting things out*. Cambridge: MIT Press.

Brown, P., Zavestoski, S., McCormick, S., Mayer, B., Morello-Frosch, R., & Altman, R. G. (2004). Embodied health movements: new approaches to social movements in health. *Sociology of Health and Illness, 26*, 50–80.

Bury, M. (1982). Chronic illness as biographical disruption. *Sociology of Health and Illness, 4*, 167–182.

Chambliss, D. F. (1996). *Beyond caring: Hospitals, nurses, and the social organization of ethics*. Chicago: University of Chicago Press.

Charmaz, K. (1991). *Good days, bad days: The self in chronic illness and time*.

Clarke, A. E., & Star, S. L. (2007). The social worlds framework as a theory-methods package. In E. J. Hackett, O. Amsterdamska, M. Lynch, & J. Wajcman (Eds.), *The handbook of science and technology studies* (pp. 113–137). Cambridge, MA: MIT Press.

Conrad, P. Medicalization: changing contours, characteristics, and contexts. In W. Cockerham (Ed.), *Health sociology on the move: New directions in theory*. Dordrecht: Springer, in press.

Cutler, D. M. (2004). *Your money or your life: Strong medicine for America's health care system*. Oxford: Oxford University Press.

De Vries, R. (2003). Protecting our virtue(s): medical sociology at 50. *Medical Sociology News, 29*, 35–38.

Dreger, A. D. (1999). *Intersex in the age of ethics*. University Publishing Group.

Epstein, S. (1996). *Impure science: AIDS, activism, and the politics of knowledge*. Berkeley: University of California Press.

Eyal, G., Hart, B., Onculer, E., Oren, N., & Rossi, N. (2010). *The autism matrix: The social origins of the autism epidemic*. Cambridge, UK: Polity.

Farmer, P. (2005). *Pathologies of power: Health, human rights, and the new war on the poor*. Berkeley: University of California Press.

Fausto-Sterling, A. (1993). The five sexes: why male and female are not enough. *The Sciences*, 20–24.

Feuchtbaum, L., Dowray, S., & Lorey, F. (2010). The context and approach for the California newborn screening short- and long-term follow-up data system: preliminary findings. *Genetics in Medicine, 12*, S242–S250.

Foucault, M. (1976). *The birth of the clinic: An archaeology of medical perception*. London: Tavistock.

Fox, R. C. (2000). Medical uncertainty revisited. In G. L. Albrecht, R. Fitzpatrick, & S. C. Scrimshaw (Eds.), *The handbook of social studies in health and medicine* (pp. 409–425). London: Sage Publications.

Frank, A. (1995). *The wounded storyteller: Body, illness, and ethics*. Chicago: University of Chicago Press.

Freidson, E. (1989). *Medical work in America: Essays in health care*. New Haven: Yale University Press.

Frosch, D. L., Grande, D., Tarn, D. M., & Kravitz, R. L. (2010). A decade of controversy: balancing policy with evidence in the regulation of prescription drug advertising. *American Journal of Public Health, 100*, 24–32.

Greene, J. A. (2007). *Prescribing by numbers*. Baltimore: Johns Hopkins University Press.

Grob, R. (2008). Is my child healthy? Is my child sick? Changing parental experiences in the age of expanded newborn screening. *Social Science & Medicine, 67*, 1056–1064.

Gross, N. (2009). A pragmatist theory of social mechanisms. *American Sociological Review, 74*, 358–379.

Hacking, I. (1999). *The social construction of what?* Cambridge, MA: Harvard University Press.

Healy, K. (2006). *Last best gifts: Altruism and the market for human blood and organs*. Chicago: University of Chicago Press.

Hirschauer, S. (2010). Editorial judgments: a praxeology of 'voting' in peer review. *Social Studies of Science, 40*, 71–103.

Huber, M., Knottnerus, J. A., Green, L., van der Horst, H., Jadad, A. R., Kromhout, D., et al. (2011). How should we define health? *BMJ, 343*, d4163.

Illich, I. (1976). *Medical nemesis*. London: Random House.

Jutel, A. (2009). Sociology of diagnosis: a preliminary review. *Sociology of Health and Illness, 31*, 278–299.

Karkazis, K. (2008). *Fixing sex: Intersex, medical authority, and lived experience*. Durham, NC: Duke University Press.

Katz, J. (1997). Ethnography's warrants. *Sociological Methods and Research, 25*, 391–423.

Katz, J. (2001). Analytical induction. In N. J. Smelser, & P. B. Baltes (Eds.), *International encyclopedia of the social and behavioral sciences* (pp. 480–484). Oxford, UK: Elsevier.

Kellogg, K. C. (2011). *Challenging operations: Medical reform and resistance in surgery*. Chicago, IL: University of Chicago Press.

Kessler, S. J. (1998). *Lessons from the intersexed*. New Brunswick, NJ: Rutgers University Press.

Kleinman, A. (1989). *The illness narratives: Suffering, healing, and the human condition*. New York: Basic Books.

Kravitz, R. L., Epstein, R. M., Feldman, M. D., Franz, C. E., Azari, R., Wilkes, M. S., et al. (2005). Influence of patients' requests for direct-to-consumer advertised antidepressants: a randomized controlled trial. *JAMA, 293*, 1995–2002.

Lee, P. A., Houk, C. P., Ahmed, F. S., & Hughes, I. A. (2006). Consensus statement on the management of intersex disorders. *Pediatrics, 118*, e488–e500.

Light, D. W. (2000). The medical profession and organizational change: from professional dominance to countervailing power. In C. E. Bird, P. Conrad, & A. M. Fremont (Eds.), *Handbook of medical sociology* (pp. 201–217). Upper Saddle River, New Jersey: Prentice Hall.

Light, D. W. (2010). Health care professions, markets, and countervailing powers. In C. E. Bird, P. Conrad, A. M. Fremont, & S. Timmermans (Eds.), *Handbook of medical sociology*. Vanderbilt University Press.

Lutfey, K., & Freese, J. (2005). Toward some fundamentals of fundamental causality: socioeconomic status and health in the routine clinic visit for diabetes. *American Journal of Sociology, 110*, 1326–1372.

Mahoney, J., & Goertz, G. (2006). A tale of two cultures: contrasting quantitative and qualitative research. *Political Analysis, 14*, 227–249.

McKinlay, J. B., & Marceau, L. D. (2002). The end of the golden age of doctoring. *International Journal of Health Services, 32*, 379–416.

Moreira, T. (2011). Health care rationing in an age of uncertainty: a conceptual model. *Social Science & Medicine, 72*, 1333–1341.

Nettleton, S. (2006). 'I just want permission to be ill': towards a sociology of medically unexplained symptoms. *Social Science & Medicine, 62*, 1167–1178.

Oldani, M. J. (2004). Thick prescriptions: toward an interpretation of pharmaceutical sales practices. *Medical Anthropology Quarterly, 18*, 325–356.

Parsons, T. (1951). *The social system*. Glencoe, IL: The Free Press.

Paul, D. B. (1997). The history of newborn phenylketonuria screening in the US. In N. A. Holtzman, & M. S. Watson (Eds.), *Promoting safe and effective genetic testing in the United States: Final report of the taskforce on genetic testing* (pp. 137–160). Bethesda, MD: National Institutes of Health.

Perrow, C. (1984). *Normal accidents: Living with high risk technologies*. New York: Basic Books.

Petryna, A. (2006). Clinical trials offshored: on private sector science and public health. *BioSocieties, 2*, 21–40.

Pierret, J. (2003). The illness experience: state of knowledge and perspectives for research. *Sociology of Health and Illness, 25*, 4–22.

Preves, S. (2003). *Intersex and the contested self*. New Brunswick, NJ: Rutgers University Press.

Rabeharisoa, V., & Callon, M. (2002). The involvement of patients' associations in research. *International Social Science Journal, 54*, 57–63.

Riessman, C. K. (1990). Strategic uses of narrative in the presentation of health and illness: a research note. *Social Science & Medicine, 30*, 1195–1200.

Rosenberg, C. E. (2007). *Our present complaint: American medicine, then and now*. Baltimore, MD: Johns Hopkins University Press.

Star, S. L. (1991). Power, technologies, and the phenomenology of conventions: on being allergic to onions. In J. Law (Ed.), *A sociology of monsters: Essays on power, technology and domination* (pp. 26–56). London: Routledge.

Starr, P. (1982). *The social transformation of American medicine: The rise of a sovereign profession and the making of a vast industry*. New York: Basic Books.

Straus, R. (1957). The nature and status of medical sociology. *American Sociological Review, 22*, 200–204.

Timmermans, S., & Buchbinder, M. (2010). Patients-in-waiting: living between sickness and health in the genomics era. *Journal of Health and Social Behavior, 51*, 408–423.

Timmermans, S., & Buchbinder, M. (2012). *Saving babies? The consequences of newborn genetic screening*. Chicago: University of Chicago Press.

Timmermans, S., & Haas, S. (2008). Toward a sociology of disease. *Sociology of Health and Illness*, .

Torbica, A., & Fattore, G. (2010). Understanding the impact of economic evidence on clinical decision making: a discrete choice experiment in cardiology. *Social Science & Medicine, 70*, 1285–1294.

Watson, M. S., Lloyd-Puryear, M. A., Mann, M. Y., Ronaldo, P., & Howell, R. R. (2006). Newborn screening: toward a uniform screening panel and system. *Genetics in Medicine, 8*, 12S–53S.

Zelizer, V. A. (2011). *Economic lives: How culture shapes the economy*. Princeton, NJ: Princeton University Press.

Zola, I. K. (1972). Medicine as an institution of social control. *Sociological Review, 20*, 487–504.